

In the Claims

1. (Currently Amended) A method for determining an adjustment amount to be made to an input chroma, C_{in} , to squeeze the input chroma values, (C_{in}) of a digital image toward a region of preferred chroma value, (C_{pref}) for the digital image, comprising:

- (a) receiving a digital image file, the digital image file including a plurality of pixels of color image data, each pixel of color image data being defined by a hue value, a chroma value, and a lightness value;
- (b) selecting a chroma value (C_{in}) from the digital image file;
- (c) selecting a preferred chroma value (C_{pref});
- (d) calculating defining a change in chroma change value as: $(\Delta C = C_{in} - C_{pref})$;
- (e) calculating defining a chroma weighting value function (C_{WEIGHT}), a hue weight value (H_{weight}), and a lightness weight value (L_{weight});
- (f) calculating defining an amount of chroma adjustment value as: $(C_{Adjust} = \Delta C * (H_{weight} * C_{weight} * L_{weight}))$; and
- (g) calculating generating an output destination chroma value, by applying chroma adjustment to chroma input as follows: $(C_{out} = C_{in} - C_{Adjust})$;
- (h) repeating, for each chroma value in the digital image file, the selecting of the chroma value from the digital image file, the calculating of the chroma change value, the calculating of the chroma adjustment value, and calculating of the destination chroma value; and
- (i) replacing each chroma value in the digital image file the associated calculated destination chroma value to generate a modified digital image file.

2. (Currently Amended) The A method, as defined claimed in claim 1, wherein the chroma weight value (C_{WEIGHT}) equals comprising a Gaussian weighting function: $C_{weight} = Gaussian(C_{pref}, C_{sigma})$.

3. (Currently Amended) The A method, as defined claimed in claim 1, wherein the lightness weight value (L_{WEIGHT}) equals comprising a Gaussian weighting function: $C_{weight} = Gaussian(L_{pref}, L_{sigma})$.

4. (Currently Amended) The A method, as defined claimed in claim 1, wherein the three one-dimensional weighting functions are replaced by a three-dimensional weighting function the hue weight value (H_{WEIGHT}) equals comprising a Gaussian weighting function: $C_{weight} = Gaussian(H_{pref}, H_{sigma})$.

Claims 5-6 (Cancelled)

7. (Currently Amended) The A method, as defined claimed in claim 1, wherein inputs the preferred chroma value (C_{pref}), the chroma weight value (C_{WEIGHT}), the hue weight value (H_{weight}), and the lightness weight value (L_{weight}) are pre-specified in a color management system.

8. (Currently Amended) The A method, as defined claimed in claim 1, wherein the inputs preferred chroma value (C_{pref}), the chroma weight value (C_{WEIGHT}), the hue weight value (H_{weight}), and the lightness weight value (L_{weight}) are dynamically specified by thea user.

9. (Currently Amended) The A method, as defined claimed in claim 24, wherein the squeezing is applied in a non-uniform way by using one weighting function at input a first chroma weight value ($C_{1WEIGHT}$), a first hue weight value ($H_{1weight}$), and a first lightness weight value ($L_{1weight}$) is calculated for chroma values less than the preferred chroma value and a second chroma weight value ($C_{2WEIGHT}$), a second hue weight value ($H_{2weight}$), and a second lightness weight value ($L_{2weight}$) is calculated for another weighting function at input chroma values greater than the preferred chroma.

Claims 10-11 (Cancelled)

12. (New) A method for squeezing hue values (H_{in}) of a digital image toward a preferred hue value (H_{pref}) for the digital image, comprising:

- (a) receiving a digital image file, the digital image file including a plurality of pixels of color image data, each pixel of color image data being defined by a hue value, a chroma value, and a lightness value;
- (b) selecting a hue value (H_{in}) from the digital image file;
- (c) selecting a preferred hue value (H_{pref});
- (d) calculating a hue change value ($\Delta H = H_{in} - H_{pref}$);
- (e) calculating a chroma weight value (C_{WEIGHT}), a hue weight value (H_{weight}), and a lightness weight value (L_{weight});
- (f) calculating a hue adjustment value ($H_{Adjust} = \Delta H * (H_{weight} * C_{weight} * L_{weight})$);
- (g) calculating a destination hue value ($H_{out} = H_{in} - H_{Adjust}$);
- (h) repeating, for each hue value in the digital image file, the selecting of the hue value from the digital image file, the calculating of the hue change value, the calculating of the hue adjustment value, and calculating of the destination hue value; and
- (i) replacing each hue value in the digital image file the associated calculated destination hue value to generate a modified digital image file.

13. (New) The method, as claimed in claim 12, wherein the chroma weight value (C_{WEIGHT}) equals Gaussian(C_{pref}, C_{sigma}).

14. (New) The method, as claimed in claim 12, wherein the lightness weight value (L_{WEIGHT}) equals Gaussian(L_{pref}, L_{sigma}).

15. (New) The method, as claimed in claim 12, wherein the hue weight value (H_{WEIGHT}) equals Gaussian(H_{pref}, H_{sigma}).

16. (New) The method, as claimed in claim 12, wherein the preferred hue value (H_{pref}), the chroma weight value (C_{WEIGHT}), the hue weight value (H_{weight}), and the lightness weight value (L_{weight}) are pre-specified in a color management system.

17. (New) The method, as claimed in claim 12, wherein the preferred hue value (H_{pref}), the chroma weight value (C_{WEIGHT}), the hue weight value (H_{weight}), and the lightness weight value (L_{weight}) are dynamically specified by a user.

18. (New) The method, as claimed in claim 12, wherein a first chroma weight value ($C1_{WEIGHT}$), a first hue weight value ($H1_{weight}$), and a first lightness weight value ($L1_{weight}$) is calculated for hue values less than the preferred hue value and a second chroma weight value ($C2_{WEIGHT}$), a second hue weight value ($H2_{weight}$), and a second lightness weight value ($L2_{weight}$) is calculated for hue values greater than the preferred hue value.

19. (New) A method for squeezing first colorspace values ($CS1_{in}$) of a digital image toward a first colorscape preferred value ($CS1_{pref}$) for the digital image, comprising:

- (a) receiving a digital image file, the digital image file including a plurality of pixels of color image data, each pixel of color image data being defined by a colorspace, the colorspace having a first colorscape value ($CS1$), a second colorscape value ($CS2$), and a third colorscape value ($CS3$);
- (b) selecting a first colorspace value ($CS1_{in}$) from the digital image file;
- (c) selecting a first preferred colorspace value ($CS1_{pref}$);
- (d) calculating a first colorspace change value ($\Delta CS1 = CS1_{in} - CS1_{pref}$);
- (e) calculating a first colorscape weight value ($CS1_{WEIGHT}$), a second colorscape weight value ($CS2_{weight}$), and a third colorscape weight value ($CS3_{weight}$);
- (f) calculating a first colorscape adjustment value ($CS1_{Adjust} = \Delta CS1 * (CS1_{weight} * CS2_{weight} * CS3_{weight})$);
- (g) calculating a first colorscape destination value ($CS1_{out} = CS1_{in} - CS1_{Adjust}$);
- (h) repeating, for each first colorscape value in the digital image file, the selecting of the first colorscape value from the digital image file, the calculating of the first colorscape change value, the calculating of the first colorscape adjustment value, and calculating of the first colorscape destination value; and

(i) replacing each first colorscape value in the digital image file the associated calculated first colorscape destination value to generate a modified digital image file.

20. (New) The method, as claimed in claim 19, wherein the first colorscape weight value ($CS1_{WEIGHT}$) equals $Gaussian(CS1_{pref}, CS1_{sigma})$.

21. (New) The method, as claimed in claim 19, wherein the preferred first colorscape value ($CS1_{pref}$), the first colorscape weight value ($CS1_{WEIGHT}$), the second colorscape weight value ($CS2_{weight}$), and the third colorscape weight value ($CS3_{weight}$) are pre-specified in a color management system.

22. (New) The method, as claimed in claim 12, wherein the preferred first colorscape value ($CS1_{pref}$), the first colorscape weight value ($CS1_{WEIGHT}$), the second colorscape weight value ($CS2_{weight}$), and the third colorscape weight value ($CS3_{weight}$) are dynamically specified by a user.

23. (New) The method, as claimed in claim 12, wherein a first colorscape weight value ($CS1_{WEIGHT}$), a second colorscape weight value ($CS2_{weight}$), and a third colorscape weight value ($CS3_{weight}$) is calculated for first colorscape values less than the preferred first colorscape value and a fourth colorscape weight value ($CS4_{WEIGHT}$), a fifth colorscape weight value ($CS5_{weight}$), and a sixth colorscape weight value ($CS6_{weight}$) is calculated for first colorscape greater than the preferred first colorscape value.